Koch, Kristine

From: Cohen, Lori

Sent: Tuesday, February 04, 2014 10:02 AM

To: Cora, Lori

Cc: Koch, Kristine; Humphrey, Chip; Yamamoto, Deb

Subject: FW: December 10 meeting summary notes mgr meeting 12-10-13 rev lc.docx

Hi – saw your email on the notes, fyi the info Kristine gave me was communicated to MK et al in the email below that accompanied and responded to the Dec 10 notes so this is part of the record on this issue.

From: Cohen, Lori

Sent: Thursday, January 16, 2014 2:19 PM **To:** 'Kirkpatrick, Margaret'; Yamamoto, Deb

Cc: Dean Marriott (dean.marriott@portlandoregon.gov); (jack.isselmann@gbrx.com) (jack.isselmann@gbrx.com);

Imeson, Tom; Doug Loutzenhiser (doug.loutzenhiser@total.com)

Subject: RE: December 10 meeting summary

HI Margaret -

Thank you for drafting the Dec 10, 2013 meeting notes (per your January 3, 2013) email. Deb and I agree that your notes do a good job capturing our discussion; there are only a few edits and a question for you in the attached notes. In addition here is information that captures the requested EPA follow up to Items I, II and III.

Item I -

The September 24th, 2013 letter from Lori Cohen to Margaret Kirkpatrick regarding the process for finalization of the remedial investigation (RI)report for the Portland Harbor Superfund Site can be modified with the following language – to be inserted to p2 of the Sept 24 letter as a new second paragraph on that page:

The EPA and LWG staff will agree on a list of "parking lot" sections that will be reviewed and can become part of the final formal dispute process if noted on the "parking lot" list. This parking lot list will only include those issues where EPA notes a section will be taken out and revised to become part of a later section of the document; LWG can then review the later section to ensure the information is included as indicated by EPA. If the information is not included as had been indicated by EPA, the LWG can dispute this section either informally and /or formally per this letter.

Please let me know if this language captures resolution of the LWG concern. And if it does, we need to be sure our respective project teams see this language.

Item II

The LWG has raised several concerns about calculation of background levels in the RI. Deb and I have looked into this issues and here are our conclusions.

Early in the development of the RI, EPA allowed for the LWG to provide its approach to calculating background. EPA has retained the fundamental approach to background calculations which present the 95% Upper Confidence Level on the mean and the 95% Upper Predictive Limit for the contaminants of concern. As you note, the changes EPA is making at this time with regard to background are with regard to how the outliers are selected for these calculations. In the final RI, EPA is identifying which stations will be considered outliers and it appears from your notes that there is now technical agreement on this issue. What remains is the concern that "EPA changed its mind" with regard to how the outliers would be identified. The following provides more background on this issue and notes that in one instance, EPA

determined that prior direction on this matter was not fully consistent with our guidance. Now that this has come to our attention, it is appropriate to adjust the dataset in accordance with EPA guidance.

Early on, the LWG proposed an approach to evaluating outliers that identified "primary" and "potential" outliers – while this approach is not described anywhere in EPA guidance, EPA agreed to review the approach. The LWG's position was that outliers should only be removed from background if they were "primary" outliers per the LWG definition. Primary outliers were identified if the value was approximately an order of magnitude greater than the mean of the data set, or if the sample was collected proximal to a known or suspected source. EPA was clear in our comments that we did not agree with this approach (see EPA 2008 Comments #1 and #3). EPA indicated that further justification of some of the primary outliers was needed and that some of the potential outliers should be reconsidered as well. There is no basis in the scientific literature for comparing the value of potential outliers to statistical values calculated on a data set that includes the potential outliers in question.

Further, in the 2008 and 2010 comments, we stated that if there were clusters of outliers, they should be removed. However, we also said that outliers that were geographically dispersed may be retained, but stated that statistical outliers should be used with caution. *Our prior conclusion that removing outliers based on clusters and distributed outliers was consistent with guidance is not true since EPA guidance does not discuss this approach.* EPA guidance clearly states that if data are due to sources, they should be removed; thus, removal of clusters would be consistent with guidance. However, guidance also states that if data are clearly distinct (or different) from the underlying dominant population, then they should be removed. In our final review of the data, the technical team looked not only at the scatter plots (geographic distributions), but at the Q-Q plots and the box-whisker plots. What is different from EPA's prior comments is that if the outlier is distinctly different from the greater population, then it is removed consistent with the definition that a defensible background data set should represent a single population. Consequently, EPA has changed its prior direction that statistical outliers that are distributed throughout the upriver reference area may be retained in the background data set because it is inconsistent with guidance.

Item III

EPA will draft an FS Process for LWG review after project manager discussions on the FS. This could be a topic for our next manager's meeting; Deb and I are looking at possible dates for a meeting in the first two weeks of February and will propose those dates to you soon. It may make sense to bring the technical project leads to our meeting as well.

Please let me know if you would like to discuss this any further. Thank you,

Lori

From: Kirkpatrick, Margaret [mailto:margaret.kirkpatrick@nwnatural.com]

Sent: Friday, January 03, 2014 2:52 PM

To: Cohen, Lori; Yamamoto, Deb

Cc: Dean Marriott (dean.marriott@portlandoregon.gov); (jack.isselmann@gbrx.com); (jack.isselmann@gbrx.com));

Imeson, Tom; Doug Loutzenhiser (doug.loutzenhiser@total.com); Kirkpatrick, Margaret

Subject: December 10 meeting summary

Lori and Deb,

It seems like a long time since we met in Seattle (because it was) but here, at last, is a draft meeting summary for your review. I'll blame it on the holidays—I got a draft out to my fellow senior managers on Dec. 20 and then didn't think about it again until yesterday.

I hope you both had lovely, restful holidays and I will look forward to your comments.

Margaret